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**REMOVAL #8 - OU#3
U.S. DOE FERNALD
OH6 890 008 976**

01-09-1991

**USEPA/DOE
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LETTER**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

1202

JAN 09 1991

REPLY TO ATTENTION OF:

Mr. Andrew P. Avel
United States Department Of Energy
Feed Materials Production Center
P.O. Box 398705
Cincinnati, Ohio 45239-8705

5HR-12

RE: Removal #8 - OU#3
U.S. DOE Fernald
OH6 890 008 976

Dear Mr. Avel:

On December 11, 1990, the United States Department of Energy (U.S. DOE) submitted an work plan for Removal #8 - Plant 1 container storage pad to the United States Environmental Protection Agency (U.S. EPA). The Plant #1 container storage pad is a part of Operable Unit (OU) #3.

U.S. EPA has reviewed the removal work plan and has the following comments:

GENERAL COMMENTS

1. There are several references in the work plan and attachments to analyses being conducted at the FMPC laboratory and following quality assurance (QA) procedures specified in the FMPC Analytical Laboratory Quality Assurance Plan, October 1987. All samples and analyses which are part of the response actions at the site under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) must be conducted in accordance with the quality assurance project plan (QAP_P) for the site wide remedial investigation (RI). In addition, all analyses must be conducted at laboratories specified in the approved QAP_P until a revised QAP_P is approved by U.S. EPA.
2. The activities described in the work plan generally appear to be adequate to mitigate the continuing releases of contaminants from the Plant 1 pad. One area of concern which was not addressed is fugitive dust emissions from the Plant 1 pad prior to completing all the required removal activities.
3. The sampling and analysis portion of this work plan lacks sufficient detail to determine if clean up goals will be adequately verified.

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4. The work plan fails to include drum overpacking and the general pad area. The work plan needs to be revised to include these activities, or another work plan must be submitted and will be reviewed concurrently with this one.
5. Applicable or Relevant and Appropriate Requirements (ARARs), which includes To Be Considered (TBC) requirements must be reviewed. Analysis of compliance with ARARs must also be included.

SPECIFIC COMMENTS

5. Section 3.2, Page 5, Paragraph 1: Characterization of wastes should include the addition of the toxicity characteristic leaching procedure (TCLP) to 40 CFR 261.
6. Section 3.4, Page 7, Paragraph 2: The citation of 40 CFR 264.12 is incorrect. The proper citation pertaining to requirements for closure activities should be included.
7. Section 4.1.2, Page 11, Paragraph 4: The analysis of soil samples from borings 1345 and 1346 probably do not accurately characterize the nature of the inorganic and organic hazardous substance list (HSL) contaminants beneath the entire Plant 1 pad. Total uranium is being used as an indicator contaminant and both soil samples collected from borings 1345 and 1346 have relatively low levels of total uranium (below FMPC's 50 part per million (ppm) action level). Samples with relatively high total uranium concentrations should have been (and now should be) collected to characterize the nature of HSL contamination. The lack of completely characterizing the nature of contamination should not interfere with the completion of the removal action, but should be fulfilled prior to the completion of the RI.
8. Section 6.2, Page 15, Paragraph 1: The term proper staging should be more clearly defined. This should include a listing ARARs that must be complied with, as well as the technical considerations that will determine what proper storage will include.
9. Section 6.2, Page 15, Paragraph 2: The work plan should estimate the amount of time that the waste pile of excavated materials will remain on site.
10. Section 6.2, Page 15, Paragraph 2: U.S. EPA requires that removal actions must comply with applicable relevant and appropriate requirements (ARARs) to the extent practicable (55 Fed. Reg. 8695). Therefore, because the requirements in 40 CFR 264 Subpart L are potential ARARs regardless if the

materials contain RCRA hazardous waste or not, the work plan should discuss how U.S. DOE intends to comply or waive these requirements.

11. Section 6.2, Page 15, Paragraph 2: If the materials stockpiled on the membrane liner are seeded, then precipitation may generate leachate and produce seeps. The work plan should present a strategy for eliminating or managing releases from the waste pile. Additionally, the approach of the use of a waste pile (creating a land disposal unit) needs to be reconsidered. There are regulatory concerns for taking such an approach. Material should be placed into roll-off containers.
12. Section 6.2, Page 15, Paragraph 3: Simply stating that the clean up objective will be reached when the average activity concentration of 35 Pci/gram is attained is not sufficient. A more detailed description should be included.
13. Section 6.3, Page 16, Paragraph 4: The sampling and management of soil and waste generated from Stage III of the removal action should be included in the work plan.
14. Section 6.3, Page 16, Paragraph 4: A more detailed discussion of the specific activities included in Stage III of the removal action should be provided.
15. Section 8.0, Page 19, Paragraph 5: The target organic compounds did not include either 1,1,1-trichloroethane (1,1,1-TCA) or tetrachloroethylene (PCE) which are reported as being present in materials located on the Plant 1 pad. The determination of whether organic contaminants are present should include both sampling of soil when organic vapors are detected with field instruments above a specified level (e.g. 1 PPM above background) as well as random soil samples.
16. Section 8.0, Page 20, Paragraph 1: The work plan should provide technical considerations and statistical procedures (including equations) to be used in determining the number and location of samples.
17. Section 8.0, Page 20, Paragraph 4: Sampling and analysis used to determine if clean up action levels have been met should be consistent with the QA objectives of the RI (55 Fed. Reg. 8735); therefore, the RI QAP_P should be followed for all sampling and analyses.
18. Section 8.0, Page 20, Paragraph 6: The work plan should provide technical considerations and statistical procedures (including equations) to be used in determining what statistically representative samples are.

19. Section 8.0, Page 20, Paragraph 6: This paragraph states that samples will be collected and analyzed in strict accordance with SW-846, 3rd Edition, Test Method for the Evaluating Solid Waste. However, several references to different analytical procedures described in other documents are listed in the following paragraphs. Sampling and analysis should be conducted in accordance with the RI QAP, P (including analytical laboratories and procedures).
20. Section 8.0, Page 20, Paragraph 8: Toxicity Characteristic Leaching Procedure (TCLP) analytical procedures should be followed as updated in the Federal Register (55 Fed. Reg. 26986).
21. Section 8.0, Page 21, Paragraph 2: The Removal Site Evaluation (RSE) states that the suspension of radionuclides in the air could lead to possible exposure to human receptors via inhalation; however, neither the RSE nor the proposed sampling plan indicated that this media will be monitored. Air samples must be collected to determine if the emission of fugitive dust from the Plant 1 pad pose a health risk.
22. Section 8.0, Page 21, Paragraph 4: The frequency of surface water sample collection should be scheduled on a monthly basis and collected as necessary depending on the amount of precipitation received during the sample period.
23. Section 8.0, Page 22, Paragraph 1: The number of "1000-series" monitoring wells listed to monitor ground-water quality is too limited. All "1000-series" wells should be sampled quarterly to establish baseline seasonal variation. In addition to the wells listed on Page 22, other wells should be considered in the semi-annual monitoring program. These wells include 1337 and 1339 which are located on the north end of the pad and wells 1356 through 1359 located in the southwest corner of the pad. Both of these areas exhibit high concentrations of total uranium in the ground water. Furthermore, wells along the perimeter of the Plant 1 pad which monitor areas of low total uranium concentrations should be sampled quarterly to monitor the magnitude of contaminant migration.
24. Attachment 3: Although it requires no action, it should be noted that the schedule presented is very conservative. For example, the time to complete the activities described as Stage II of the removal action can conservatively be estimated at 10 months. The 15 months listed in the schedule is overly conservative considering that all design is apparently complete and that bid specifications have already been prepared. Although it appears that 24 months

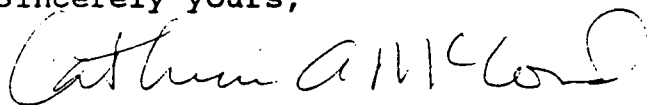
to complete Stage III of the removal action is also very conservative, there is insufficient information provided to justify the 24 months or estimate how conservative this estimate is. False schedules should not be developed just so that someone can say that the work was completed ahead of schedule.

25. Attachment 3: From the description of Stage III activities in the work plan, it does not appear that it is a requirement that Stage II activities be completed prior to initiating work on Stage III activities.

As required by the 1990 Consent Agreement, U.S. DOE must revise the work plan to correct the above deficiencies. The revised work plan must be submitted within thirty (30) days of the date of this letter.

Please contact me at (312/FTS) 886-4436 if there are any questions regarding this matter.

Sincerely yours,



Catherine A. McCord
On-Scene Coordinator

cc: Richard Shank, OEPA
Graham Mitchell, OEPA - SWDO
Joe LaGrone, U.S. DOE - ORO
Leo Duffy, U.S. DOE - HDQ